

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number
WO 2005/005950 A1

(51) International Patent Classification⁷: G01M 17/02, (74) Agents: BOTTERO, Carlo et al.; Pirelli S.p.A, Viale Sarca, 222, I-20126 Milano (IT).

(21) International Application Number: PCT/EP2003/007185

(22) International Filing Date: 4 July 2003 (04.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): PIRELLI PNEUMATICI S.p.A. [IT/IT]; Viale Sarca, 222, I-20126 Milano (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BRUSAROSCO, Massimo [IT/IT]; Pirelli Pneumatici S.p.A., Viale Sarca, 222, I-20126 Milano (IT). MANCOSU, Federico [IT/IT]; Pirelli Pneumatici S.p.A., Viale Sarca, 222, I-20126 Milano (IT). AROSIO, Daniele [IT/IT]; Pirelli Pneumatici S.p.A., Viale Sarca, 222, I-20126 Milano (IT).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,

AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

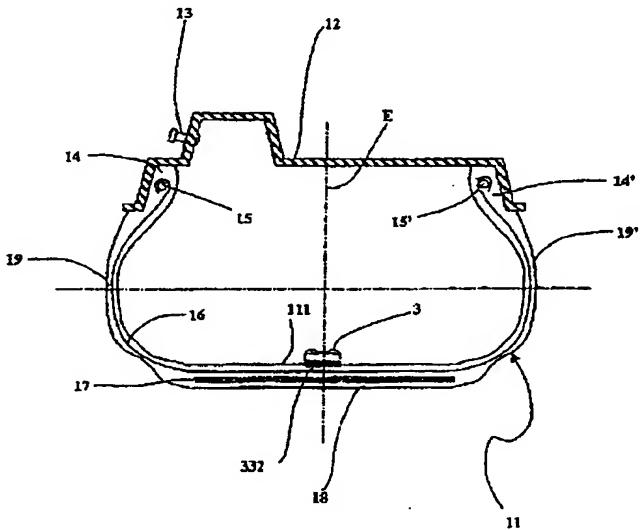
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND SYSTEM FOR DETERMINING A TYRE LOAD DURING THE RUNNING OF A MOTOR VEHICLE



(57) Abstract: A method for determining a load exerted on a tyre fitted on a vehicle during a running of said vehicle comprises the following steps: acquiring a first signal comprising a first portion representative of a radial deformation to which a first tread area portion of said tyre is subjected during passage of said first tread area portion in a contact region between said tyre and a rolling surface; measuring an amplitude of said radial deformation in said first signal portion; estimating a rotation speed and an inflation pressure of said tyre in correspondence of said radial deformation; deriving said tyre load from said amplitude, said rotation speed and said inflation pressure.

WO 2005/005950 A1

BEST AVAILABLE COPY